

RFID News Roundup

ThingMagic unveils RFID reader with built-in antenna; WaveZero and Mu-Gahat create start-up offering RFID inlay design and production; John Taylor Fertilizers Co. manages equipment with RFID; RFCamp intros UHF tag for high-temperature, -metal and -stress environments; SkyeTek reader module supports UHF ICs from EM Microelectronic; Visible Assets, CipherLab team to offer RuBee-based industrial computers.

July 31, 2008—The following are news announcements made during the past week.

ThingMagic Intros Integrated RFID Reader/Antenna

ThingMagic, a privately held RFID reader developer, has introduced Astra, an interrogator with an integrated antenna. The Astra is designed for asset-management applications—such as document management, inventory control, baggage tracking and medical equipment location—in offices, health-care facilities and other environments requiring ease of installation and deployment flexibility. The interrogator supports the EPCglobal Gen 2 and ISO 18000-6C standards, with anti-collision, dense reader mode (DRM) and advanced antijamming functionality, a power-over-Ethernet (POE) option designed to reduce cabling and electrical outlet proximity requirements, a Wi-Fi option, a built-in 865-956 MHz circularly polarized antenna, ThingMagic's MercuryOS software for application development, network management and security, a port for an additional external antenna, and a development kit for customized applications, settings, deployments and management. The Astra features a small form factor (10.2 by 10.2 by 3 inches) and ThingMagic's Mercury5e embedded reader module. It offers a read range of up to 30 feet for Gen 2 RFID tags, according to ThingMagic, and can read more than 190 tags per second. Astra is available now in North America for \$995, with volume discounts available. Versions for other countries are expected to be available in the near future.

WaveZero and Mu-Gahat Create Start-up Offering RFID Inlay Design and Production

WaveZero and Mu-Gahat have combined their RFID operations to create Rfidium. Based in Sunnyvale, Calif., the start-up offers a service for custom and low- to medium-volume production of inlays and high-volume antenna production. The service combines WaveZero's shielding solutions for wireless equipment, telecommunications and medical devices with Mu-Gahat's RFID printed electronics capabilities (see Printed Electronics Start-up Specializes in Low-Volume Tag Production). Rfidium's in-house staff of RFID antenna design engineers will work with customers to optimize RFID tag performance for a specified application. It can then produce, via a proprietary software design process, from one to five simultaneous RFID inlay variations (antenna plus chip on flexible plastic substrate) for product application and field-testing. For both prototyping and just-in-time production, Rfidium's production lines enable customers to handle runs as small as 150 units. When it's time to ramp up production, the company has specialized equipment that can meet high-volume production requirements. In addition, Rfidium claims it can provide finished converted label solutions via authorized converting partners, and the start-up carries a variety of stock RFID inlays using chips from such providers as Impinj and Texas Instruments. Although both WaveZero and Mu-Gahat contribute to Rfidium's operation, WaveZero will continue running its EMI shielding business as an independent entity, while Mu-Gahat will continue operating its gaming and printed electronics research and manufacturing business.

John Taylor Fertilizers Co. Manages Equipment With RFID

John Taylor Fertilizers Co., a provider of agricultural chemicals and fertilizers to growers throughout California, has implemented battery-assisted passive (BAP) RFID tags to help track sprayers, conveyors, dispensers and other equipment used to transport, store and dispense its products. The RFID system leverages ultrahigh-frequency (UHF) 902-928 MHz RFID tags from Intellex. InCom served as the systems integrator on the project and has also provided OnSite, a solution that incorporates a handheld RFID interrogator and software. OnSite is designed to help John Taylor Fertilizers automatically track tagged equipment inventory in real time, from when the equipment leaves the company's yard in Yuba City, Calif., to the time it arrives at the location to which it is delivered, as well as when it is returned to the yard and how often it is used. Prior to implementing the Intellex and InCom solution, the fertilizer company found it difficult to track which equipment was in the yard or out at customer sites, and how often the various pieces of equipment were used. This resulted in under-utilized equipment, delayed customer response times and unnecessary purchases of new equipment. In 2007, Intellex and InCom deployed a similar system for Bear River Supply, a provider of crop fertilizers, chemicals and other agricultural products and services to farmers in northern California (see Agricultural Company Tracks Equipment Loaned to Farmers).

RFCamp Intros UHF Tag for High-Temperature, -Metal and -Stress Environments

RFCamp, an RFID tag manufacturer based in Seoul, South Korea, has announced four new UHF RFID tags that it claims can overcome three trouble spots for typical RFID tags: metal, heat and mechanical stress. The tags, designed to endure temperatures of more than 400 degrees Fahrenheit (204 degrees Celsius), as well as high humidity and mechanical shock, contain EPC Gen 2 chips from Impinj with 96 bits of memory. The four tags include the TITAN Smallest, which measures 1.5 by 0.4 by 0.11 inch in size and has a read range of 4 feet; the TITAN Ultra-thin, which is 0.05 inch thick and offers a read range of 4 feet; the TITAN Basic, similar in size than a typical UHF tag antenna (3.6 by 0.53 inch), with a read range of about 7 feet; and the TITAN Fastener, the model with the largest measurement (6 by 1.1 inches) and the longest read range (about 10 feet). The tags are now available worldwide.

SkyeTek Reader Module Supports UHF ICs from EM Microelectronic

SkyeTek, a provider of embedded RFID reader technology located in Westminster, Colo., has announced that its SkyeModule M9 reader module now works with UHF integrated circuits (ICs) from EM Microelectronic, a manufacturer of RFID transponder ICs. The SkyeModule M9 also supports tags complying with the EPC Class 1 Gen 1 and Gen 2 and ISO 18000-6B/C standards. With the EM Microelectronic integration, the reader module now supports a full set of EM4122 and EM4444 UHF ICs from EM Microelectronic, according to SkyeTek, making it suitable for such applications as access control, airline baggage, anti-counterfeiting, handheld reading, item-level inventory and supply chain management. The new EM-compliant M9 is available now through SkyeTek's M9 Developer Kit, which comes with a complete RFID solution allowing for demonstration and proof-of-concept development when integrating RFID into applications or products. In addition, EM Microelectronic offers its EM UHF RFID Developer Kit, featuring SkyeTek's M9 reader module, which is approximately half the size of a business card, and an assortment of UHF tags based on EM's 4x22 and 4x44 chips and the upcoming 4324, EM's first EPC Gen 2-compliant IC.

Visible Assets, CipherLab Team to Offer RuBee-based Industrial Computers

Visible Assets, Inc., a Stratham, N.H., maker of wireless real-time asset visibility solutions and networks based on the RuBee (IEEE P1902.1) standard, is partnering with CipherLab, a provider of automated identification and data capture (AIDC) products and systems headquartered in Taipei, Taiwan. A new interface with Visible Assets' RuBee protocol, the two companies claim, enables CipherLab's 9400 and 9500 mobile industrial computers to overcome many of the problems currently experienced with RFID in harsh environments, particularly those containing water or metal. The integrated solution of the RuBee protocol and industrial computers, the partners add, will create a solution that is well suited for the health-care, government and defense, agriculture, mission-critical tools, transportation and logistics industries. To transmit and receive data, RuBee tags primarily utilize magnetic waves (which are not attenuated by water) and can thus be used in the presence of liquids. They also operate at a low frequency—132 kHz—and low frequencies are less

affected by metal.

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